

**AMENDMENT**

In the Claims:

Please amend claims 2 and 3 as per attached with this response and amendment. Attachment A contains a marked-up copy of the claim amendments, while Attachment B contains a clean copy of the amended claims.

**REMARKS**

Applicant is submitting this amendment to dependent claims 2 and 3 to better define the structural relationship between the elements within the claims. As is currently claimed in twice-amended claims 2 and 3, the structural components of the apparatus of the present invention has much more definition. In addition, the amendments will help one of ordinary skill in the art to understand the invention. Support for the amendments to the claims, and also to the amendments filed with the response submitted on May 14<sup>th</sup>, may be found through out the specification as originally filed, and in particular Figs. 1, 2, 4, 6 and 8 and the accompanying description. Applicant further submits that the amendments to the claims do not add new matter within the meaning of 35 U.S.C. §132.

In view of the foregoing and the previously filed response, applicant respectfully requests the Examiner to reconsider and

Attorney Dkt. No. P-15149  
Serial No. 09/431,159  
Filed: November 1, 1999

withdraw the all pending rejections, and to allow all of the claims pending in this application.

If the Examiner has any questions or comments regarding this matter, he is welcomed to contact the undersigned attorney at the below-listed number and address.

Respectfully submitted,

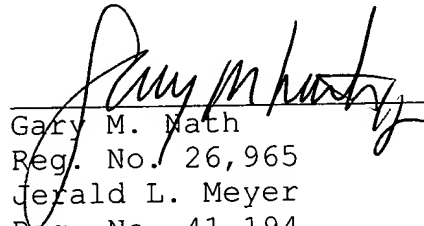
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Date:

May 15, 2012

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Serial No.: 09/431,159

Group Art Unit: 1764

Filed: November 1, 1999

Examiner: R. Varcoe Jr.

For: **METHOD OF AND APPARATUS FOR PROCESSING HEAVY  
HYDROCARBON FEEDS**

**ATTACHMENT A - MARKED-UP COPY OF CLAIM AMENDMENTS**

Please amend claims 2 and 3 as follows:

2. (Twice Amended) Apparatus according to claim 1 including means for supplying only the heavy portion of said light vacuum fractions to said light vacuum fraction thermal cracker and wherein a conduit extracts the lighter portion of said light vacuum fractions as products.

3. (Twice Amended) Apparatus according to claim [2] 1 including a hydrogen donor system for processing the lighter portion of said light vacuum fractions and producing a hydrogen donor stream, wherein the heavy portion of said light vacuum fractions is supplied via supply means to said light vacuum fraction thermal cracker, said hydrogen donor system including:

a) a hydrotreater for producing a hydrotreated hydrocarbon feed from said lighter portion of said light vacuum fractions;

b) hydrotreater supply means for supplying said lighter portion of said light vacuum fractions to said hydrotreater;

[b)] c) a still further heater for producing a heated, hydrotreated hydrocarbon stream from said hydrotreated hydrocarbon feed;

[c)] d) a further atmospheric fractionating tower for fractionating said heated hydrotreated hydrocarbon stream for producing further light atmospheric fractions products and hydrotreated atmospheric bottoms;

[d)] e) an additional heater for heating said further atmospheric bottoms and producing heated, further atmospheric bottoms; and

[e)] f) a further vacuum fractionating tower for fractionating said heated, hydrotreated atmospheric bottoms and producing hydrotreated lighter vacuum fractions products and further vacuum residue, an outlet of said further vacuum fractionating tower containing the heavier portion of said hydrotreated lighter vacuum fractions products or hydrogen donor stream being connected to the inlet of said deasphalted oil thermal cracker and also being connected to the inlet of said light vacuum fraction thermal cracker such that the heavier portion of said hydrotreated lighter vacuum fractions products or hydrogen donor stream is supplied to said deasphalted oil thermal cracker and another portion of said heavier portion of said hydrotreated lighter vacuum fractions products or hydrogen donor stream is supplied to said light vacuum fraction thermal cracker for thermally cracking said heavy portion of said light vacuum fractions.

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For: **METHOD OF AND APPARATUS FOR PROCESSING HEAVY  
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**ATTACHMENT B - CLEAN COPY OF AMENDED CLAIMS**

Please amend claims 2 and 3 as follows:

2. (Twice Amended) Apparatus according to claim 1 including means for supplying only the heavy portion of said light vacuum fractions to said light vacuum fraction thermal cracker and wherein a conduit extracts the lighter portion of said light vacuum fractions as products.

3. (Twice Amended) Apparatus according to claim 1 including a hydrogen donor system for processing the lighter portion of said light vacuum fractions and producing a hydrogen donor stream, wherein the heavy portion of said light vacuum fractions is supplied via supply means to said light vacuum fraction thermal cracker, said hydrogen donor system including:

21 a) a hydrotreater for producing a hydrotreated hydrocarbon feed from said lighter portion of said light vacuum fractions; F

b) hydrotreater supply means for supplying said lighter portion of said light vacuum fractions to said hydrotreater;

c) a still further heater for producing a heated, hydrotreated hydrocarbon stream from said hydrotreated hydrocarbon feed;

d) a further atmospheric fractionating tower for fractionating said heated hydrotreated hydrocarbon stream for producing further light atmospheric fractions products and hydrotreated atmospheric bottoms;

e) an additional heater for heating said further atmospheric bottoms and producing heated, further atmospheric bottoms; and

f) ~~a~~ further vacuum fractionating tower for fractionating said heated, hydrotreated atmospheric bottoms and producing hydrotreated lighter vacuum fractions products and further vacuum residue, an outlet of said further vacuum fractionating tower containing the heavier portion of said hydrotreated lighter vacuum fractions products or hydrogen donor stream being connected to the inlet of said deasphalted oil thermal cracker and also being connected to the inlet of said light vacuum fraction thermal cracker such that the heavier portion of said hydrotreated lighter vacuum fractions products or hydrogen donor stream is supplied to said deasphalted oil thermal cracker and another portion of said heavier portion of said hydrotreated lighter vacuum fractions products or hydrogen donor stream is supplied to said light vacuum fraction thermal cracker for thermally cracking said heavy portion of said light vacuum fractions.

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